

# PATENT SPECIFICATION



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PROVISIONAL SPECIFICATION.

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## Exercising Machine.

I, FREDERICK EDWARD COE, a British Subject, of 88, Staines Road, Twickenham, Middlesex, do hereby declare the nature of this invention to be as follows:—

This invention relates to exercising machine by means of which a person using it is enabled to perform walking movements and yet remain stationary, means being provided for producing conditions that obtain when the user is walking uphill.

A machine according to the invention comprises an oblong frame supporting a number of transverse rollers around the end ones of which and over and under the others there passes an endless band of canvas, india-rubber, or like suitable material. The person using the machine performs walking movements on the band and holds his body against forward movement by pressing against a handle on a vertical arm at the front of the machine or secures his body at the waist by means of straps anchored at their ends to substantially vertical posts at the front and the rear of the machine. Since the user is

held against forward movement the upper length of the endless band is set into continuous motion and in conjunction with the rollers, which rotate provides a platform that moves backwardly as fast as the user tends to move forwardly.

A roller movably arranged to enable the band to be tautened and a device which keeps the band centralized are preferably included.

The frame is conveniently of channel irons arranged cavities inwards and in the cavities of the two side irons are wooden blocks with transverse grooves in their upper faces for the reception of the spindles of the rollers. Above the spindles strips of oil-retaining felt are conveniently located for the purpose of lubricating the said spindles.

The band or one of the rollers is preferably arranged to drive a mileage indicator.

Dated this 10th day of August, 1931.  
HY. FAIRBROTHER,  
Chartered Patent Agent,  
30 & 32, Ludgate Hill, London.

## COMPLETE SPECIFICATION.

### Exercising Machine.

I, FREDERICK EDWARD COE, a British Subject, of 88, Staines Road, Twickenham, Middlesex, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to an exercising machine comprising a movable platform consisting of an endless belt adapted to be displaced over transverse rollers when a person on the platform carries out walking movements.

The invention has reference more particularly to the construction of a frame and means carried by the frame for supporting the above rollers and consists in an oblong structure formed by channel members arranged channels inwards with the channels on the longer sides contain-

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ing bearings for the spindles of the rollers.

The said bearings preferably comprise transverse grooves in the edges of wood strips arranged in the channels and some of the strips preferably contain blocks of oil-retaining felt for the purpose of lubricating the said spindles.

Means comprising a roller adapted to be urged away from its fellows by spring devices is preferably provided for the purpose of keeping the belt taut. One of the rollers may be provided with a fly-wheel and the machine may have a mileage indicated adapted to be advanced by a part, for example, a fly-wheel, driven by the machine.

The person using the machine performs walking movements on the band and holds his body against forward movement by

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pressing against a handle on a vertical arm at the front of the machine or securing his body at the waist by means of straps anchored at their ends to substantially vertical posts at the front and the rear of the machine. Since the user is held against forward movement the upper length of the endless band is set into continuous motion and in conjunction with the rollers, which rotate, provides a platform that moves backwardly as fast as the user tends to move forwardly.

A machine in accordance with the present invention is illustrated by way of example in the accompanying drawings, in which:

Fig. 1 is a side view partly in section of the said machine;

Fig. 2 is a plan view thereof;

Fig. 3 is a fragmentary view on a larger scale showing, more particularly, the manner in which rollers that bear the endless belt are mounted in the frame of the machine; and

Fig. 4 is a fragmentary view on a larger scale showing the manner in which a supporting handle on the machine may be collapsed.

In this example the machine comprises an endless belt 1 of canvas, india-rubber or the like that passes over and under a plurality of parallel rollers 2 supported at their ends in the longer sides of an inclined oblong frame 3. A person using the machine grips a handle bar 4 at the upper end of a vertical bar 5 secured at its bottom to the frame 3 and performs walking movements. As the user carries out these movements the upper lap of the belt and the rollers provide a platform that moves backwardly as fast as the user tends to move forwardly with the result that the user although "walking" remains stationary. The distance "walked" is indicated by a mileage indicator 6 arranged to be advanced by a projection 7 on the inner side of a fly-wheel 8 rigid with one of the rollers. It will be understood that the primary object of the fly-wheel is to maintain smooth movements of the belt.

The rollers are supported by trunnions at their ends, which, with the exception of the trunnions on the lowermost roller, enter recesses 9 formed by opposite grooves in strips 10, 10 of wood or the like in the cavities of the side members of the frame. The grooves in the upper members 10 may be similar to those in the lower members but in Fig. 3 a groove is shown as being formed by a block 11 of grooved felt let into an upper strip. The blocks such as 11 retain oil or grease.

The trunnions on the lowermost roller

enter recesses in blocks such as 12 slidably arranged within the cavities of the side members. Springs such as 13 are interposed between the strips 10, 10 and the blocks 12 in such a manner that the springs tend constantly to urge the blocks and therefore the lowermost roller away from the other rollers, and therefore the belt is kept taut.

The bar 5, and legs 14 which hold the frame in the inclined position shown more particularly in Fig. 1, are collapsible against the upper and lower sides of the frame. When the handle 4 of the bar 5 is in use the lower end of the bar 5 is arranged within a socket 15 bolted or otherwise secured to the higher end of the frame 3. To collapse the bar when not required it is lifted vertically until the lower end of a slot 16 in the bar engages a pin 17 extending diametrically through an eye 18 and the bar 5. The eye 18 is hinged at 19 to the bracket 15 and, when the bar has been lifted in the manner described, can be turned on the hinge 18 to enable the bar to collapse against the frame in the manner indicated in chain lines. The legs 14 are secured by hinges such as 20 to the sides of the frame and can be turned on these hinges to collapse against the said frame.

The bar 5 is provided at its upper end with a buckle 21 for the purpose of enabling a user to support himself with the aid of a belt. A bar similar to 5 may be arranged at the lower end of the frame and the belt carried from buckle to buckle and passing around the user's waist.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. Exercising machine comprising a movable platform provided by an endless belt that is displaced over transverse rollers when a person carries out walking movements on the belt, characterised in that a structure for supporting the rollers consists in an oblong frame formed by side members of channel section arranged channels inwardly and containing in the two longer channels bearings for the spindles of the transverse rollers.

2. Walking machine according to claim 1, in which the bearings for the said spindles comprise grooved strips (such as 10).

3. Walking machine according to claim 2, in which bodies of oil retaining felt are contained in some of the grooves for the purpose of lubricating the spindles.

4. Walking machine according to claim 1, 2 or 3, having an end roller adapted to

be urged away from its fellows by means of a spring (13) for the purpose of keeping the belt taut.

5. Walking machine according to any of the preceding claims, wherein one of the rollers is provided with a fly-wheel.

6. Walking machine according to any of the preceding claims, provided with a mileage indicator adapted to be advanced by a part, for example the fly-wheel of claim 5, driven from one of the rollers.

7. Walking machine according to any of the preceding claims, provided with a vertical bar or bars substantially as and for the purpose described.

8. Exercising machine substantially as herein described and illustrated.

Dated this 25th day of April, 1932.

H. FAIRBROTHER.

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[This Drawing is a reproduction of the Original on a reduced scale.]

